

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars:

Claim objections

Claims 6-9 are objected to for certain informalities. In particular, the Examiner asserts that the phrase "to receive" should be replaced by the phrase "for insertion into."

Claim 6 is amended according to the Examiner's suggestion. In view of the amendment, withdrawal of the objection is requested.

Interpretation of claims under 35 U.S.C. § 112, second paragraph

The Examiner has indicated that "directional control means for submerged surface cleaning apparatus" is considered to invoke 35 USC 112 6th paragraph as it meets the 3-prong test as outlined in MPEP 2181. Applicant respectfully disagrees, noting that the third prong states that "the phrase "means for" or "step for" *must not be modified* by sufficient structure, material, or acts for achieving the specified function." Applicant notes that the entirety of claim 1 defines a structure of a directional control means, such that at least the third prong is not met.

Rejection of claims 6-9 under 35 U.S.C. § 103(a)

Claims 6-9 presently stand rejected as being unpatentable over Fouts (U.S. 3,900,221) in view of Bartholomew (U.S. 4,893,845) and further in view of Sulzyc et al. (U.S. 5,551,734). This rejection is respectfully traversed for at least the following reasons.

It is respectfully submitted that the cited references fail to form a prima facie case of obviousness of any of claims 6-9.

The cited references fail to disclose or suggest each and every element as set forth in claim 6.

Moreover, while the present application, as well as claims 6-9, is directed to a "directional control means for submerged surface suction cleaning apparatus," none of the cited references have anything to do with a submerged surface suction cleaning apparatus

(a swimming pool cleaner) or with directional control of or for a submerged surface suction cleaning apparatus. Further, because the cited references have nothing at all to do with a submerged surface suction cleaning apparatus or for a directional control for such an apparatus, these references do not disclose, suggest, or even hint at the problem solved by the present invention, let alone any solution to it.

For at least these reasons, it is respectfully submitted that the cited references fail to form a prima facie case of obviousness of any of claims 6-9. Accordingly, it is respectfully submitted that claims 6-9 are allowable over the cited references, and withdrawal of the rejection is requested.

The cited references fail to disclose or suggest each and every element as set forth in claim 6.

Applicant submits that there are several structural differences between the invention claimed in claim 6 and Fouts' device, which is the primary reference cited in the rejection. For example, the cuffs in claim 6 are defined to include a peripheral rib that engage a corresponding peripheral groove, the ribs being clearly integral with the cuffs. This results in a far simpler arrangement with fewer parts. The rib/groove combination is significant to achieve the aim of directional control, in that it ensures a free swivelling action between a pool cleaner and a suction hose.

In addition, claim 6 recites a *protruding socket at an inlet end* of the elbow joint, and a *protruding spigot at the outlet end* of the elbow joint. In particular, a first extension (at the inlet end of the elbow joint) terminates in a protruding socket to engage an outlet of a cleaning apparatus, while a second extension (at the outlet end of the elbow joint) terminates in a protruding spigot for insertion into a suction hose. In contrast, Fouts discloses a male termination at both ends of the fitting. Fouts does not disclose or suggest *a protruding socket and a protruding spigot*. On the contrary, Fouts' fitting terminates at each end with identical male members (connectors 16), whereas in the claimed invention the socket and the spigot are not identical components.

None of the other references cited (Bartholomew and Sulzyc) disclose or suggest the claimed arrangement including a *protruding socket at an inlet end* of the elbow joint, and a *protruding spigot at the outlet end* of the elbow joint. Therefore, none of the cited

references, or any combination thereof, discloses or suggests each and every element set forth in claim 6. Accordingly, no prima facie case of obviousness is formed at least because the combined references fail to teach or suggest a *protruding socket at an inlet end* of the elbow joint, and a *protruding spigot at the outlet end* of the elbow joint.

The present application is directed to a directional control means for submerged surface suction cleaning apparatus, providing a solution as described in the present application in that:

In use the elbow joint will provide a free swiveling action between the pool cleaner and the suction hose. This in turn ensures that the forces applied on the pool cleaner during its working cycle will always be such that it can release itself from any restraint placed on its movement. The swivel connections provide 360° of relative rotation with respect to the pool cleaner body which is usually included to the surface to be cleaned. This in turn ensures that the pool cleaner will move at an ever-changing angle to the flexible hose and thus achieve a completely random pattern. (see page 4, lines 17-24 of the present application).

None of the cited references relates to, or discusses in any way, any pool cleaning apparatus or any directional control means for a pool cleaning apparatus or any other propelled mobile apparatus.

Fouts discloses a swivel fitting for rotatably mounting two ends of hose or pipe together. Fouts does not disclose or suggest the swivel fitting as an intermediate fitting between a hose and another apparatus.

The problem that Fouts addresses is that in earlier arrangements, to ensure proper sealing, an O-ring would be tightened, but that this tightening would hamper swiveling. (see *Fouts*; col. 1, lines 15-37). The solution proposed by Fouts is to have first and second seal means that form a seal between the cylindrical walls of the male and female members and between the end wall and front wall respectively. This allows rotation of the members relative to one another, and maintains alignment of the members.

Applicant respectfully submits that Fouts provides a very specific, and rather complicated, solution that would not have been considered when considering the problem faced by the applicant in the present application, namely to control the direction of a swimming pool cleaner.

In other words, there is no teaching or suggestion that Fouts discloses a *directional control means* for a *submerged surface suction cleaning apparatus* (that is, a pool cleaner), as the Examiner asserts.

While Fouts is not related to any pool cleaning apparatus or to any directional control means for a pool cleaning apparatus, Bartholomew is even further removed from the presently claimed invention. Bartholomew discloses a firewall heater line adapter that mounts two swivelable elbows that act as conduits and conduit junctions. (see *Bartholomew*; Abstract).

A primary object of Bartholomew is the provision of an adapter bracket positionable in a firewall opening that includes a fluid port connection arrangement permitting the angular position of adapter ports to be changed in order to releasably receive and swivelably retain conduits discharging and returning heated fluids to a fluid reservoir, such as an engine. (see *Fouts*; col. 1, lines 29-35). Again, as with Fouts, Bartholomew does not provide any suggestion on how to address the problem that was faced by the applicant of the present invention, namely to control the direction of a swimming pool cleaner.

Notably, while Bartholomew's fluid port connection arrangement permits the angular position of adapter ports to be changed, Bartholomew's tubular elbows 18 have one end disposed in conduits 26, 28 which are fixed to a firewall 12, and not attached to a movable or mobile body or apparatus. Thus, Bartholomew's disclosure provides no teaching or suggestion relating or relevant to provision of a directional control means for a movable or mobile body or apparatus such as a pool cleaner.

Accordingly, as with Fouts, Bartholomew does not provide any suggestion on how to address the problem that was faced by the applicant of the present invention, namely to control the direction of a swimming pool cleaner.

Finally, Sulzyc discloses a connection piece for the connection of a pipe to a plastic housing of a valve. The connection piece comprises a threaded plug made of metal, which is arranged in a plastic sleeve of the housing. At least one circumferential projection and one corresponding circumferential groove are provided between the threaded plug and the plastic sleeve. The threaded plug is secured only in an axial manner

and freely rotatable beared in the plastic sleeve by the connection of the circumferential projection and the corresponding circumferential groove. (see *Sulzyc*; Abstract; col. 2, lines 3-22).

While *Sulzyc* includes a rib/groove combination, the aim of *Sulzyc* is to provide a connection piece comprising a plastic sleeve and a threaded plug made from metal, in which the plastic sleeve is not subjected to a torsional stress normally unavoidable during mounting operation of a pipe. Again, as with Fouts and Bartholomew, *Sulzyc* does not provide any suggestion on how to address the problem of controlling the direction of a swimming pool cleaner.

Moreover, while the Examiner asserts that the combination of *Sulzyc* with Fouts and Bartholomew would have been obvious "in order to provide an audio indication of connection", Applicant respectfully submits that *Sulzyc* does not provide any teaching or suggestion of providing an audio indication of connection. *Sulzyc* does not provide any indication that connection of the plastic sleeve to the threaded metal plug makes a noise, or is performed in an environment where any such noise would be audible or relevant to the assembly of these components. Applicant respectfully submits that none of the cited references provide any indication at all of an audio indication of connection, or the desirability of such.

35 USC 103 specifies that, to render a claimed invention obvious and therefore unpatentable, "the differences between the subject matter sought to be patented and the prior art are such that ***the subject matter as a whole*** would have been obvious at the time the invention was made to a person having ordinary skill in ***the art to which said subject matter pertains***." (emphasis added). Moreover, "the examiner must ascertain what would have been obvious to ***one of ordinary skill in the [art to which the subject matter pertains]*** at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. (MPEP 2141.03(III), citing *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983); emphasis added).

The art to which the subject matter of the present invention pertains is that of swimming pool cleaners, and in particular to directional control means for swimming pool

cleaners. The art to which the subject matter of the present invention pertains is not sealing arrangements for a swivel fitting (as in Fouts), an automotive firewall heater line adapter (as in Bartholomew) or a valve housing connection piece (as in Sulzyc). Applicant respectfully submits that the Examiner has failed to establish, by any objective basis or by any cited prior art, what is the level of ordinary skill in the art pertaining to swimming pool cleaners, and in particular to directional control means for swimming pool cleaners.

Further, Applicant respectfully submits that the Examiner has failed to articulate how the results of these combined references would have been predictable to persons of ordinary skill in the art of swimming pool cleaners, or directional control means for swimming pool cleaners. In particular, the Examiner has not articulated how or why the directional control of a swimming pool cleaner would have predictably resulted from the asserted combination of the cited references.

Applicant respectfully submits that the Examiner has exercised impermissible hindsight in assembling parts, selected from disparate references, according to Applicant's own disclosure and not in view of any teaching or suggestion found in the prior art, nor in view of any reasonable attempt to solve a problem described or suggested in the prior art, leading to the combination of these elements.

For at least these reasons, it is respectfully submitted that the cited references fail to form a prima facie case of obviousness of the presently claimed invention, and therefore claims 6-9 are allowable over the cited references. Accordingly, withdrawal of the rejection is requested.

Conclusion

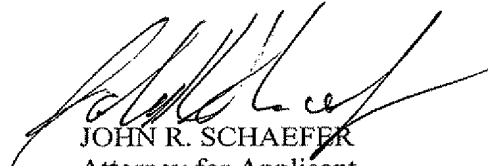
In view of the amendments to the claims, and in further view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is requested that claims 6-9 be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the Applicant's attorney, the Examiner is invited to contact the undersigned at the numbers shown.

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Respectfully submitted,



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